

DS8100A

Top Performance
Laser Scanner

DATALOGIC™



Unattended Scanning Systems

General Description

The new DS8100A is a top performing fixed position laser bar code reader, purposely designed to satisfy the needs of Sorting applications for the Transportation & Logistics market. The DS8100A represents the evolution of a winning concept started in 1998 with the DS8100: the use of state-of-the-art- technology to design the best performing fixed position scanner on the market. The new DS8100A is based on an innovative 3-diode structure, that offers an unbeatable real time depth of field. As a result of improved ASTRA™ technology that increases its already impressive performance, 3 laser diodes can switch electronically from one to the other depending on the bar code distance from the scanner. This means that the scanner is able to capture the bar code on an object of any possible shape in any position, as the DS8100A focuses on the bar code and not on the object profile. Translating this into a benefit for the customer, the new ASTRA™ offers unbeatable reading performance over a fast moving conveyor system, since two different objects present under the DS8100A laser line can be identified simultaneously without any problem. Advanced ASTRA™ technology, moreover, permits the PackTrack™ function, reducing the min. object gap and increasing system throughput, to be fully exploited.

The SW platform of the DS8100A, based on the GENIUS™ program, permits 100% control of scanner behavior via SW: the new DIGITECH™ signal processing technology permits all the scanner parameters to be configured via GENIUS™. As a result, scanner customization is made by simply downloading the right SW recipe into the scanner.

The DS8100A is completely compatible with the DX8200A, the 6000 scanner family (DS6300, DS6400, DS6500) and the SC6000 industrial controller, making Datalogic's offer more flexible and scalable, with numerous possibilities and solutions. Connectivity has been improved with the introduction of built-in Ethernet connectivity with implemented TCP-IP, Ethernet/IP, Modbus TCP and Profinet protocols.

A practical display with keyboard increases the DS8100A's ease of use by offering a simple and complete human interface without the need of a PC. The new ASR™ function permits completely automatic slave scanner replacement.

The new DS8100A inherits the mechanical design of the DS8100, with exactly the same dimensions and footprint.

Features

- > Reading performance benchmark
- > ACR™-4 code reconstruction algorithm
- > ASTRA™ technology for the electronic focusing system
- > Digitech™ signal processing technology
- > PACKTRACK™ to minimize the gap between objects and increase system productivity
- > GENIUS™ multi-language SW for easy scanner configuration/setup
- > Display and keyboard
- > Built-in Ethernet TCP/IP connectivity on some versions

Applications

- > Parcel sorting system
- > Postal applications
- > Automatic baggage handling
- > Cargo applications
- > Loading/unloading systems

Specifications

ELECTRICAL CHARACTERISTICS

POWER SUPPLY 20 to 30 Vdc
 POWER CONSUMPTION 20W - 30W max

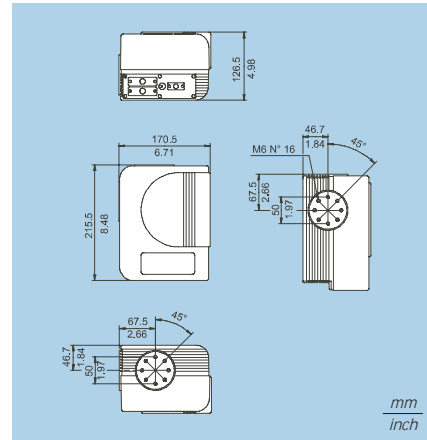
MECHANICAL CHARACTERISTICS

DIMENSIONS 215.5 x 170.5 x 126.5 mm (8.48 x 6.71 x 4.98 in);
 OM: 280 x 254 x 195 mm (11.03 x 10 x 7.68 in)
 WEIGHT 5.0 Kg (176.3 oz); OM: 6.4 Kg (225.7 oz)
 CASE MATERIAL Aluminium

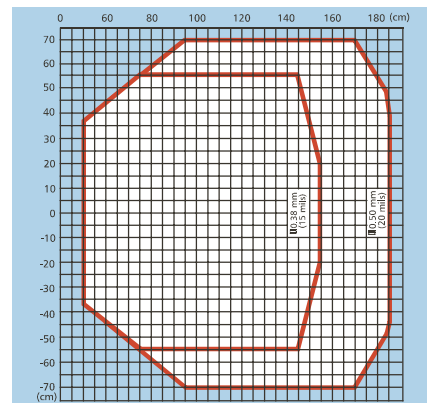
PERFORMANCE

LIGHT SOURCE Visible Laser Diode (630 - 680 nm)
 LIGHT RECEIVER Avalanche photodiode
 MAX. RESOLUTION CODE See diagrams
 SCAN RATE 1,000 scans per second
 MAX. DEPTH OF FIELD See diagrams
 MAX. READING FIELD See diagrams
 MAX. READING DISTANCE See diagrams
 READABLE CODES 22 symbologies incl. 2/5 family, Code 39, Code 93,
 Code 128, EAN/UPC, Codabar, EAN128
 CODE AUTODISCRIMINATION Up to 10 different codes
 INTERFACE CARD Main interface RS232/RS485 Half Duplex and Full Duplex
 Baud rate 115,200 bauds
 Aux. interface RS232
 INPUT SIGNALS 3 programmable and 1 Encoder (optocoupled);
 Auxiliary Input (optocoupled) (NPN/PNP transistor)
 OUTPUT SIGNALS 3 programmable (NPN/PNP transistor)
 SETUP Via serial port commands and Windows™ based software
 program Genius™
 OPERATING MODES 'On line', 'Serial on line', 'Automatic', 'Continuous',
 'PackTrack™', 'Test'
 DISPLAY 2 line by 20 character LCD
 KEYPAD 3 keys
 LED INDICATORS 3 LED status indicators: 1) Power on (red) Good Read (red);
 2) Ext.Trigg. (yellow) TX Data (green); 3) Encoder (yellow)
 Network (red)
 LASER CLASSIFICATION IEC 825 Class 2
 LASER CONTROL Security system to turn laser Off in case of motor
 slow down or failure
 ENVIRONMENT
 OPERATING TEMPERATURE 0 to 50 °C (32 to 122 °F)
 STORAGE TEMPERATURE -20 to 70 °C (-4 to 158 °F)
 HUMIDITY 90% non condensing
 VIBRATION RESISTANCE IEC 68-2-6 test FC 1.5 mm, 10 to 55 Hz; 2 hours on each axis;
 OM: 1.5 mm @5 to 9,1Hz ;0.5 mm @9.1 to 150 Hz
 SHOCK RESISTANCE IEC 68-2-27 test EA 30 G 11 ms; OM: 15 G 11 ms;
 3 shocks on each axis
 PROTECTION CLASS IP64 (IP65 optional)

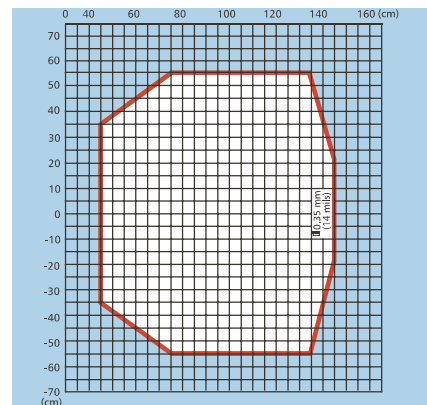
Dimensions



Reading Diagrams



Standard Reading Diagram



OM Reading Diagram